

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

ANNE DE LACOUR, ANDREA WRIGHT,
and LOREE MORAN individually and on
behalf of all others similarly situated,

Plaintiffs,

v.

COLGATE-PALMOLIVE CO., and TOM'S
OF MAINE INC.

Defendants.

Case No. 1:16-cv-08364

**REPLY DECLARATION OF
J. MICHAEL DENNIS, PH.D.**

November 21, 2018

I, J. Michael Dennis, Ph.D., declare as follows:

1. I have been retained by counsel for Plaintiffs in the matter of the named Plaintiffs Anne de Lacour, Andrea Wright, and Loree Moran ("Plaintiffs") versus the Colgate-Palmolive Co. and Tom's of Maine, Inc. ("Defendants"). If called upon to testify, I would and could testify competently to all such subject matter in this Declaration and Expert Report.
2. I have been asked by Plaintiffs' counsel to reply to the expert declaration of Dr. Ran Kivetz (September 21, 2018) and reply to the expert declaration of Dr. Joseph A. Krock (September 21, 2018). In my reply below, I address the criticisms made by Dr. Krock and then followed by my reply to Dr. Kivetz for any criticisms not already addressed in my reply to Dr. Krock. I also provide criticisms of Dr. Kivetz's surveys.

3. My current *curriculum vitae* is attached as Attachment A.
4. Plaintiffs' counsel has retained my services at the hourly rate of \$400. My compensation is not contingent on the results of my work or any outcome of the litigation.

I FOLLOWED THE SAME RIGOROUS PROCEDURES IN MY CONJOINT SURVEY THAT I APPLIED TO MY OTHER COURT-ACCEPTED CONSUMER SURVEYS

5. In designing and conducting my conjoint survey, I adhered to my procedures and quality standards that I have established in my litigation research practice and as evidenced by my surveys that have been accepted by the courts. I relied on my more than twenty years as a survey research expert – the last fifteen of which as a court-qualified testifying expert – to design and conduct my conjoint survey in this matter.
6. I point to the fact that I followed the same rigorous procedures for my *Tom's of Maine* conjoint survey that I followed in my other litigation surveys that have been accepted by the courts, including but not limited to my consumer surveys conducted in the matters of *Zill v. Sprint*; *Ebin v. Kangadis Food Inc.*; *Sachs and Alden v. Toyota Motor Corporation*; *Avram v. Samsung Electronics America, Inc. and Lowe's Home Centers*; *Scotts EZ Seed Litigation*; *Dzielak v Whirlpool*; *Pettit v. Procter & Gamble [RE: Flushable Wipes]*. Specifically, I followed the same procedures for my conjoint survey that I followed in my *Canada Dry* conjoint survey for which the class has been certified.¹

MY CONJOINT SURVEY METHODOLOGY IS APPLICABLE TO THE MEASUREMENT OF THE PRICE PREMIUM ATTRIBUTABLE TO THE "NATURAL" CLAIM IN DEFENDANTS' DEODORANT PRODUCTS

7. I am confident based on my expertise in consumer market research that the conjoint survey approach that I used in the measurement of the price premium attributable to the "natural" claim can be reliably applied to Defendants' deodorant products, contrary to Dr. Krock's assertion (§11). By definition, conjoint methodology is a tool that can be used to estimate the economic valuation of attributes for any common consumer product such as deodorants. If asked by Plaintiffs' counsel to conduct such a survey and analysis, I shall do so. I shall use

¹ *Fitzhenry-Russell, et al. v. Dr. Pepper Snapple Group, Inc.*

the same conjoint survey methodology and analysis that I employed in the price premium survey regarding the Defendant's toothpaste products.

MY PRICE PREMIUM FINDINGS ARE BOTH RELIABLE AND GENERALIZABLE ACROSS GEOGRAPHIES AND CONSUMER SEGMENTS

8.

A horizontal bar chart consisting of 20 black bars of varying lengths. The bars are arranged in a single column. The lengths of the bars vary significantly, with the longest bar being the 10th bar from the top and the shortest being the 1st and 20th bars. The bars are all solid black and have no labels or titles.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

10. Defendants’ assertions that my survey results cannot be applied to a diverse and heterogenous segment of consumers is belied by the fact that my price premium findings are remarkably consistent regardless of consumer segment. Dr. Kivetz complained that I made no effort to analyze the price premium finding by sub-groups (§16); however, the fact is that I conducted this analysis in the market simulator (attached to my expert report) on which I relied for some of my opinions. I purposefully collected 1,000 interviews, which is far more than the sample size for most conjoint surveys, to make possible the analysis of data across different sub-groups.

MY PRICE PREMIUM FINDINGS APPLY TO THE ENTIRE CLASS PERIOD, NOT TO THE MOMENT IN TIME WHEN RESPONDENTS ANSWERED MY SURVEY QUESTIONS

11. Dr. Krock, without evidence, simply asserts that my 2018 survey results cannot be applied to purchases that could have occurred in 2015 – only three years ago. Dr. Krock appears unaware that the popular appeal of the “natural” claim extends back decades, not just three years. Dr. Krock provides no evidence that consumers care more or care less about the “natural” claim in 2018 compared to 2015. Furthermore, I designed my survey to include respondents purchasing throughout the proposed class period.

MY SURVEY HAD ADEQUATE SAMPLE SIZE FOR THE PRICE PREMIUM ANALYSES I CONDUCTED

12. Dr. Krock complains that I should have obtained more completed interviews. The relevant sample size is the number of interviews analyzed together to produce the price premium statistic. The fact is that I completed far more interviews for analysis – a total of 1,000 – than recommended by standard conjoint survey textbooks where 150 to 400 conjoint interviews is regarded as sufficient for conjoint analysis.²
13. Dr. Krock's complaint is that I should have had sufficient sample size to accommodate some 2.7 million unique combinations among the 14 attributes (§29). To isolate any price premium attributable to the "natural" claim, it is not necessary to display to respondents all possible combinations of the attributes in the conjoint survey. Nor is it necessary to analyze the interactions across all 2.7 million unique combinations. Very few conjoint surveys will show all possible combinations of the products to the respondents. In contrast, it is common to show a reasonable, balanced subset of the possible combinations when the product has several attributes or potential claims. Rao explains that "In general, only a subset of possible alternatives is chosen for the study. Experimental design methods exist for selecting such subsets."³ When designing conjoint surveys, the sensible researcher takes a few things into account: 1) the ability of the respondent to cognitively digest the material, 2) the realism of the product, 3) minimizing bias that could exist in the selection of the subset shown, and 4) ensuring that the model can estimate all main effects with a desired precision.⁴ I took all of these considerations into account in selecting the subset of possible combinations of

² Orme, B. K., & Chrzan, K. (2017). Becoming an Expert in Conjoint Analysis: Choice Modeling for Pros. Sawtooth Software, p. 97.

³ Rao, V. R. (2014). Applied Conjoint Analysis. New York, NY: Springer, p. 56.

⁴ Huber, J. (2005). Conjoint Analysis: How We Got Here and Where We Are (An Update). In Sawtooth Software Conference (Vol. 98382, p. 360). Orme, B. K., & Chrzan, K. (2017). Becoming an Expert in Conjoint Analysis: Choice Modeling for Pros. Sawtooth Software, p. 47-48.

attributes to show the respondents.

14. In the qualitative research that I have conducted for this conjoint study and others, I have found that the respondents can be cognitively challenged to process large lists of claims, especially when the respondents are required to scroll up and down the screen in an online survey. Therefore, I limited the number of claims to two to four claims for each product presented to the respondents. The available space for claims on actual retail packaging also supports a realistic limit of four claims. To minimize bias in the specific products shown in the design, I balanced how often each claim is shown with each other, which is the standard practice in designing conjoint surveys.
15. The Sawtooth conjoint files delivered to Defendants attest to the fact that my conjoint survey balanced the product attribute combinations so that all two-way combinations of the tested claims would be shown to respondents (typically 400 or more times for each two-way combination across the 1,000 respondents who completed my conjoint survey). Lastly, a statistical test of the efficiency of the conjoint design shows (a standard test in Sawtooth Software that Defendants can run) that there was more than enough sample size to estimate the main effects of each attribute. Sawtooth recommends that the standard errors (a measure of statistical precision) should be 5% or smaller for estimating main effect utilities.⁵ [REDACTED]
[REDACTED]
[REDACTED] In short, I took extraordinary care to assure that the conjoint survey balanced the combinations of product attributes shown the respondents, and statistical tests confirmed that I exceeded industry guidelines for sample size.

⁵ A smaller standard error is desirable; a smaller standard error translates into a higher degree of confidence in the accuracy of the survey finding. *See* Orme, B. K., & Chrzan, K. (2017). Becoming an Expert in Conjoint Analysis: Choice Modeling for Pros. Sawtooth Software, p. 96.

**MY SURVEY DOES INCORPORATE SUPPLY-SIDE FACTORS AND DOES NOT
EXCLUSIVELY RELY ON DEMAND-SIDE FACTORS**

16. Defendants' experts assert that conjoint surveys cannot incorporate supply-side factors and therefore measure only the demand side. That is incorrect. Conjoint surveys can incorporate supply-side, "real world" market information. Conjoint surveys are not limited by an exclusive focus on the "demand" or "subjective" side of the market.
17. My conjoint survey incorporates supply-side factors in both (1) the conjoint survey design and (2) the analysis of the results. The conjoint survey included market-based price points for the price attribute based on actual real-world market-based prices of Defendants' Product and for competing products. The actual real-world market-based pricing of the Products reflects the actual number of units sold, the costs of manufacturing, the costs for distribution, advertising, and marketing, and margin, among other supply-side factors. The conjoint survey also incorporates other market-based attributes besides price such as competing products in the marketplace. The market simulator that I used to calculate the price premium also incorporates the market-based price points for the price attribute based on actual real-world prices that consumers paid for Defendants' Products and for competing products.

**MY IMPLEMENTATION OF THE CONJOINT SURVEY RESULTED IN A
BALANCED SAMPLE**

18. Dr. Krock complains that not all 200 versions of the conjoint design were seen the same number of times by the respondents. 92% of the versions were seen four to six times, while the remaining 8% of the versions were shown fewer than four times to respondents. Dr. Kock claims that, since there are 1,000 respondents and 200 versions, each version should have been shown five times to respondents. If the respondents were systemically shown one version of the conjoint design more than others, according to Dr. Krock, my survey would have an "unbalanced sample."
19. Dr. Krock fails to note that Sawtooth Software automatically assigns each respondent to the next version in the design. This is an automated procedure and not subject to my discretionary control. The Sawtooth Software is validated and is the industry standard. There are no indications in the data to indicate that the Sawtooth Software did not assign the

versions correctly to the respondents. Of the 1,000 interviews used for analysis, only 44 respondents saw versions that were viewed fewer than 4 times. The variation shown in the number of respondents assigned to each version is a result of factors that do not affect the results and in fact are factors that improved the quality of the survey data. Following standard industry practices, the respondents starting the conjoint survey but not completing the conjoint survey were not retained for analysis. In addition, following standards common to the survey industry, the respondents with unreasonably short survey completion times were removed by the survey firm that I hired to collect the survey data. These removed cases were not analyzed by me. Removing the respondents with lower survey completion times conforms with common survey research procedures and the academic literature.⁶ Because there are 200 versions, the impact on the survey results is trivial by having just a few versions shown less often to respondents.

**A STATISTICAL TEST SHOWS THAT RESPONDENTS UNDERSTOOD MY
CONJOINT SURVEY QUESTIONNAIRE AND PROVIDED RELIABLE DATA**

20. Dr. Krock argues that my survey presented the respondents “inconsistent alternatives” (¶47) that would “lead a sophisticated shopper to pass on a product that included any inconsistencies.” The “inconsistent alternative” scenario would be experienced potentially by the respondents who made the effort to click on the hyperlink in the conjoint for a product’s ingredients and then comparing the ingredient lists with the product’s claims. (There are three products per conjoint screen and ten conjoint screens; therefore, the respondents have thirty opportunities to view ingredient lists when making their choices.)
21. Dr. Krock is presupposing that my respondents would be willing to make the effort and, furthermore, have the cognitive ability to click on the ingredient lists in the conjoint survey, read the ingredient lists carefully, and then do systematic comparisons of the ingredients to

⁶ Kapelner, A., & Chandler, D. (2010). Preventing satisficing in online surveys. Proceedings of CrowdConf 2010. Krosnick, J. A. (1991). Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys. Applied Cognitive Psychology, 5(3), 213-236.

the product's claims. A respondent would need to go through this exercise thirty times in taking the survey.

22. I designed the survey the way I did to avoid the potential for confusing the respondents. To explain, the conjoint survey includes an attribute called "Product Benefits" that has the level "Anti-Plaque & Whitening" based on Defendants' Products. To avoid confusing the respondents, I displayed the ingredients list from the actual product shown to the respondents. Therefore, for respondents presented the "Anti-Plaque & Whitening" product, the respondents had the opportunity to view the ingredient list for that product. In my expert opinion, there was some likelihood that some respondents could potentially recall the ingredients of products that they had purchased before; hence, I associated the ingredients lists with their actual products.
23. The problem for Dr. Krock's theory is that there are not any data to support it. There is no evidence that my respondents were confused or passed on a product because of a supposed discrepancy between the ingredient list and a claim. I thoroughly tested the survey questionnaire with cognitive interviews and pretesting. In these tests of the survey, none of the respondents indicated that they were confused by what Dr. Krock calls "inconsistent alternatives." If a respondent had indicated in any way that they were confused by the survey, I would have acted on that feedback. But that feedback was not presented to me by the respondents.
24. More fundamentally, the appropriate statistical test to address Dr. Krock's theory shows unequivocally that my respondents were not confused by so-called "inconsistent alternatives." The appropriate statistical test is called "RLH," which stands for "root likelihood." The RLH score is a measure of the extent to which respondents are consistent in making their choices in a conjoint survey. For my survey, the best possible score for a conjoint survey is a 1.0, while the worst possible score is 0.25. A score of 1.0 would indicate that 100% percent of the time the respondents' product choices in the conjoint survey can be perfectly predicted by their utility estimates (that is, the part-worth utilities). Practically

speaking, a 1.0 is not attainable in conjoint surveys. A score of 0.25 would indicate that the respondents' choices are not predictable at all by their utility scores. While every conjoint survey is unique, the generally acceptable range for the RLH score for reliable conjoint surveys is .5 or higher. [REDACTED] This is well within the range of expected RLH scores for high quality conjoint surveys.⁷ This key statistical test proves that my survey respondents were not confused as alleged. The RLH score can be calculated by Defendants by using the conjoint data and the Sawtooth Software.

25. Dr. Krock also criticizes my survey for purportedly having “overlapping attributes” that “could lead to additional confusion by respondents” (§57). Dr. Krock is alleging that some of the attributes could potentially have significant overlap in meaning. However, there is no evidence to indicate that my survey respondents were confused. The average RLH score indicates that my respondents did not experience confusion in any significant way, and my cognitive interviews and pretest did not reveal any potential confusion by the respondents.

I WAS TRANSPARENT IN MY ANALYSIS

26. Dr. Krock claims that my analysis “lacked transparency” (§57). However, the fact is I made available to Defendants all the data and information necessary to replicate my analyses. I provided the raw respondent choice data, the conjoint design, the raw utility data, and the market simulator. Dr. Krock's own expert report provides evidence of my transparency as he is able to conduct analyses about sample balance, versions of the conjoint shown to the respondents, attributes shown to the respondents, and so on. With respect to the market simulator, which he claims transforms “hidden statistical results,” there is nothing “hidden” whatsoever. I made available to Defendants all the necessary data and information to replicate the analyses produced by the market simulator.

⁷ Sawtooth Software. The CBC System for Choice-Based Conjoint Analysis (Version 9). Orem, UT: Sawtooth Software.

**MY CONJOINT SURVEY RESULTS ARE
APPROPRIATELY SENSITIVE TO PRICE**

27. [REDACTED]
28. The “logical inconsistency” is easily explained and does not defy “economic theory.” The pattern (which Dr. Krock finds puzzling) is explained by the fact that when the price of a good is lowered or increased, price utility is not linear. Consumers predictably are willing to spend more for additional features when the base price of a product is lower rather than higher. This reflects the reality that people are willing to pay more for additional features when the base price of a product is lower because they have more available budget to do so, compared to when the base price is higher. For instance, consider the example of car purchasing behavior. Logically, the average consumer has more left to spend on non-essential extras and upgraded features when the base price of the vehicle is lower because the base price of the car represents a smaller fraction of the consumer’s purchasing power. As the base price of the car increases, all other factors being held constant, consumers tend to be less willing to “splurge” for extras and non-essentials for the simple reason that that they have less remaining purchasing power. Put simply, consumers’ price sensitivity to additional features (such as adding the “natural” claim) increases as the offered price increases.
29. Accordingly, the utility estimation (Hierarchical Bayes) model used in my conjoint analysis takes into account each individual’s non-linear price curve, leading to a more accurate estimation of the consumers’ utilities models.⁸ This model, as explained above, reflects the reality that people are willing to pay more for additional features when the base price of a product is lower.

⁸ Louviere, J., Train, K., Ben-Akiva, M., Bhat, C., Brownstone, D., Cameron, T. A., et al. (2005). Recent Progress on Endogeneity in Choice Modeling. Marketing Letters, 16(3-4), 255-265. Mazzanti, M. (2003). Discrete Choice Models and Valuation Experiments. Journal of Economic Studies, 30(6), 584-604. Miller, K. M., Hofstetter, R., Krohmer, H., & Zhang, Z. J. (2011). How Should We Measure Consumers’ Willingness to Pay? An Empirical Comparison of State-of-the-Art Approaches. Journal of Marketing Research, 48(1), 172-184.

**IMPORTANCE SCORES IN CONJOINT ANALYSIS ARE NOT A SUBSTITUTE
FOR PRICE PREMIUM ANALYSIS**

30. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

**MY CONJOINT SURVEY PRESENTS MARKET REALISTIC
CHOICE SCENARIOS TO MY RESPONDENTS**

31. Dr. Kivetz criticizes my survey for failing to “approximate actual marketplace conditions” which he claims leads to my creating a “focusing illusion” (¶196). Dr. Kivetz argues that I failed to present to the respondents “many toothpaste aspects, features, benefits, and claims that in actuality are important in many consumers’ purchase decisions” (¶196). Dr. Kivetz argues that I presented the challenged “natural” claim in an artificially prominent manner

⁹ Louviere, J. J., & Islam, T. (2008). A Comparison of Importance Weights and Willingness-to-Pay Measures Derived from Choice-Based Conjoint, Constant Sum Scales and Best–Worst Scaling. Journal of Business Research, 61(9), 903-911.

¹⁰ Verlegh, P. W., Schifferstein, H. N., & Wittink, D. R. (2002). Range and Number-of-Levels Effects in Derived and Stated Measures of Attribute Importance. Marketing Letters, 13(1), 41-52.

¹¹ Orme, Bryan K. and Keith Chrzan. (2017). Becoming an Expert in Conjoint Analysis: Choice Modelling for Pros, Chapter 14. Sawtooth Software.

(¶198). Dr. Kivetz takes the argument further, complaining that the “survey’s purpose and the researcher’s hypothesis were suggested to participants” (which he technically labels “demand effects”) (¶196).

32. Below I reply to each of Dr. Kivetz’s points, I shall make a general point first: In designing and conducting the conjoint survey in the *Tom’s of Maine* litigation, I followed the same survey development procedures and conjoint survey architecture that I implemented for the conjoint survey in the *Canada Dry* litigation for which the class has been recently certified.¹² In that conjoint survey, I also included brand as an attribute, featured the products competing with the litigation product, used a wide assortment of claims from the defendant’s product and from its competitors, and included other attributes identified through my review of the defendant’s market research and my cognitive interviews, among other sources of information.
33. While Dr. Kivetz presents as “facts” that my survey creates “demands effects” and presents a “focusing illusion” to the respondents, as a matter of record Dr. Kivetz has no compelling data to support his appropriation of the mantle of providing “facts” about bias in my survey. Dr. Kivetz lobs more buzz words than data in his critique of my work. Dr. Kivetz himself has not conducted a conjoint survey on this matter that could dispute my survey; he elected to conducted a test-control experiment that, by design, is incapable of calculating a price premium. Dr. Kivetz has not demonstrated how he would design a conjoint survey that would cure the purported failure in my survey to have the correct attributes. Dr. Kivetz hurls generalizations about the purported failures of my conjoint survey without substantiating his criticisms in any survey data.

34. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

¹² *Fitzhenry-Russell, et al. v. Dr. Pepper Snapple Group, Inc.*

- [REDACTED]
35. Second, Dr. Kivetz preaches to the choir in explaining that my survey would have been improved if I had shown the actual product packaging. I trust that Dr. Kivetz is aware that the experimental design of the study involves the production of hundreds of versions of the products to have a balanced design, which complicates dramatically the ability to produce product images corresponding to all the attribute combinations that I displayed to my respondents. I am hopeful but not optimistic that Dr. Kivetz will concede that the standard approach in conjoint surveys is to do what I did in my survey: to show the brand logos to communicate to the respondent visual information about the product packaging in terms of graphics, colors, and word art, while other attributes are shown as text. I followed industry-standard practice by presenting my choice tasks in a matrix table of text instead of images. The presentation methodology that I used corresponds to standard practices in other choice surveys, and is the default presentation in Sawtooth conjoint survey software, the industry leader in online conjoint surveys.¹³
36. Third, Dr. Kivetz criticizes me for conducting only seven cognitive interviews (§204). A reading of my curriculum vitae would have revealed to him that I have prior knowledge about designing conjoint surveys from other research that I have conducted. Nonetheless, seven cognitive interviews are sufficient. It is my standard to conduct six to eight cognitive interviews. As a court-qualified expert who has been conducting litigation surveys for over 15 years, I have seen many instances where research experts attempt to submit survey data into evidence when not even a pretest was done. I have certainly witnessed many more instances where cognitive interviews were not conducted. In contrast, I actually made the effort to talk with real toothpaste purchasers in my cognitive interviews in my thorough background work for developing this questionnaire. I also conducted a pretest. The fact that I made these time investments to design the survey correctly, in my view, is worth noting.
37. Dr. Kivetz also criticizes me for not including in my conjoint survey every suggestion made to me by the respondents in my cognitive interviews. This is where the “art” of conjoint design comes in. Designing conjoint surveys requires expert judgment. A common error in conjoint design is to overload the respondents with attributes, leading to frustrated

¹³ Sawtooth Software Technical Paper Series, 2017, “The CBC System for Choice-Based Conjoint Analysis (Version 9).” Sawtooth Software.

respondents and poor survey data. Not all possible attributes can or should be included in conjoint surveys. For example, in the book Applied Conjoint Analysis, Professor Vithala Rao explains:

[S]election of attributes and levels is a very crucial step in the design of conjoint studies. This step is as much an art as a science. The scientific aspects arise from an understanding of the consumer's choice process, more specifically salient attributes involved in the choice of an alternative by a majority of target consumers. The art aspect of this process arises from relating one's understanding to potential managerial action. Given the numerical explosion of the total number of hypothetical alternatives, it is often prudent to opt for a "smaller" number of attributes and levels to include in the study.¹⁴

38. Dr. Kivetz also complains that I should have included even more claims from the Tom's of Maine packaging than I did (§207, §208). That complaint is baseless. I included no fewer than thirteen claims in my conjoint survey – that is an adequate number of claims to test in a conjoint survey. Furthermore, it is not necessary to test every single claim on a product package. I refer Dr. Kivetz to the above quotation from Professor Rao.
39. Contrary to Dr. Kivetz's varied but data-free assertions, I followed standard procedures in establishing a market realistic choice context for the respondents to make their choices by including attributes such as brand, price, and product descriptions. I included all attributes that had been identified during the cognitive interviews as potentially important to consumers. By restricting my survey respondents to actual purchasers of Tom's of Maine toothpaste products, I restricted the sample to consumers with actual, personal, and recent experience in making toothpaste product decisions. The respondents could, therefore, draw on their own recent experience as purchasers to inform the market-realistic choice exercises in the survey that were personally relevant to them. Prior to taking my survey, the respondents had already established preferences with the attributes that I featured in my survey. As verified in my cognitive interviews, respondents taking the survey were already familiar with the consumer buying process because they are actual consumers themselves with preferences and opinions related to toothpaste brands, pricing, labels, etc.

¹⁴ Rao, V. (2014). Applied Conjoint Analysis, Springer, pp. 43-4.

DR. KIVETZ'S EXPERIMENTAL SURVEY DESIGN
PRODUCED UNRELIABLE RESULTS

40. As explained in his expert report, Dr. Kivetz conducted a survey attempting to address issues in this litigation. In my expert opinion, Dr. Kivetz's survey is wholly unreliable and cannot be used to criticize the findings from my price premium survey.
41. Dr. Kivetz had the opportunity to conduct a conjoint survey. If he had done so, he could have provided statistics concerning the research questions that I addressed in my conjoint survey. He would have been able to quantify any price premium attributable to the challenged "natural" claim. He elected to not do so. His experimental test-control design cannot produce price premium statistics. The ambition for his project is limited to providing some information on the materiality of the challenged "natural" claim. His survey, because of his selection of an experimental test-control methodology, is too blunt an instrument to dispute my quantitative measurement of a price premium.
42. Dr. Kivetz conducted two survey experiments: a national survey for the toothpaste study and a state-level survey for the deodorant study. For both the toothpaste and deodorant studies, half the respondents were exposed to Defendants' product label with the challenged "natural" claim (the "test" group) and half were exposed to Defendants' product label without the challenged "natural" claim (the "control" group). On the basis of this experiment, Dr. Kivetz concluded that the challenged claim – "natural" – did not "cause" and did not increase the likelihood that Class Members would purchase Defendants' Products.
43. Dr. Kivetz defined the study population to include consumers who had personally purchased toothpaste in the past three months and also who intended to personally toothpaste during the next three months. *Ceteris paribus*, Dr. Kivetz used the same population definition for the state-level deodorant study. Operationally, there were other screening criteria that Dr. Kivetz employed that filtered out respondents that Dr. Kivetz determined might provide unreliable data.
44. Dr. Kivetz's methodology has flaws ranging from substantial to fatal. I discuss the substantial flaw first.
45. With respect to the substantial flaw, Dr. Kivetz's definition of the target population is over-inclusive. Unlike my survey limited to Tom's of Maine purchasers, Dr. Kivetz includes toothpaste consumers of any type. This is a problem for Dr. Kivetz to attempt to generalize

his findings to Class Members that are obviously Tom's of Maine toothpaste and deodorant purchasers. [REDACTED]

[REDACTED]

[REDACTED] Dr. Kivetz did not even limit his sample to purchasers from the "natural" product segment of personal care products. Dr. Kivetz did not target the correct population. His respondents cannot be expected to answer survey questions similar to consumers that value the "natural" attribute. His sample is skewed because he sampled the general personal care consumer, not Tom's of Maine consumers or even consumers who purchase natural personal care products.

46. However, there is a fatal flaw in the design of Dr. Kivetz's project that, in my expert opinion, renders the data unreliable. The fatal flaw is that Dr. Kivetz did not control for consumers' preconceptions, attitudes, opinions, feelings and brand loyalties towards Tom's of Maine. The respondents can be reasonably expected to have well-formed attitudes regarding Tom's of Maine toothpaste and deodorant products. Because Tom's of Maine products are nationally distributed and well known to consumers, all respondents exposed to Dr. Kivetz's test stimulus and control stimulus can be expected to have had at least some exposure to Tom's of Maine product packaging in real life in stores or potentially purchased the product itself. Nonetheless, Dr. Kivetz designed his survey as if he were testing a new product that consumers would be reacting to for the first time.
47. Dr. Kivetz should not have used the actual Tom's of Maine packaging for his test stimulus and control stimulus. He would have been better served using packaging images with a fictitious brand and imagery that respondents cannot trace back to the Tom's of Maine brand. The survey responses to his questionnaire for both test-group and control-group respondents were infected by their pre-existing familiarity with Tom's of Maine personal care products.
48. It is not logical to assume – which is what Dr. Kivetz did – that the removal of the "natural" claim from the control stimulus packaging would somehow erase the memories and preconceptions that consumers have about Tom's of Maine which has made enormous

[REDACTED]

investments in its brand imaging as a “natural” product. Consumers’ preconceptions would have been formed prior to taking Dr. Kivetz’s survey when the consumers were repeatedly exposed to Defendants’ Products having the “natural” label conspicuously positioned on the product packaging.

49. Whether viewing the product with or without the “natural” label in his survey, Dr. Kivetz’s respondents would readily identify the product label as the Tom’s of Maine toothpaste or deodorant product with the familiar graphics, colors, and distinctive lettering and logo for its brand name. Without carefully studying the control-group stimulus, there is no reason for a respondent to think that the control product without the “natural” claim is in any way different in quality than the Tom’s of Maine product he or she normally sees on product shelves. Even if the respondent did notice that the familiar “natural” label was missing from the consumer product, we have no information to indicate that the respondent perceived that the toothpaste or deodorant was in any way different from the usual Tom’s of Maine personal care products sold in stores.
50. Dr. Kivetz’s test-control experiment should have but did not prevent consumers from basing their responses on pre-existing attitudes, opinions, and experiences regarding Defendants’ Products. At a minimum, an appropriate experiment would have involved creating a fictitious product with no discernible connection to the actual Tom’s of Maine brand, and then having a test-control design including and excluding the challenged claim on the label. With this design, there would have been an attempt to prevent the respondents from relying on their pre-existing opinions and impressions in answering the substantive survey questions. By these means, Dr. Kivetz could have attempted to isolate the impact of the “natural” claim on consumers’ purchasing decisions. Instead, he chose to include all the Tom’s of Maine brand imagery in the stimuli shown to the respondents, making it impossible to disentangle the impact of the “natural” label from consumers’ prior attitudes, opinions, and other preconceptions about Tom’s of Maine toothpaste and deodorant. As a result, Dr. Kivetz’s data cannot be used to justify his opinion that the “natural” label does not have a significant impact on consumers’ purchase decisions.
51. The relevant literature is unambiguous about the threat of respondents’ preconceptions when conducting test-control surveys like Dr. Kivetz’s. A general principle in choosing control groups is to address the research question of whether the survey results are likely to be

affected by the preconceptions of respondents.¹⁶ Dr. Kivetz presents no information to contradict the common-sense conclusion that his respondents brought pre-existing feelings about Defendants' Products in answering his survey questions.

52. Put simply, consumers already pre-disposed to purchase Defendants' Products before taking Dr. Kivetz's survey are not dissuaded from continuing to be interested in purchasing the product simply because a survey experiment removed the "natural" claim from the product package.

53. Dr. Kivetz did not even take the elementary step of instructing respondents to focus solely on the stimulus as the basis for their answers and to not consider information from their past experience in shopping for toothpaste or deodorant. Dr. Diamond notes that while this is a technique used to reduce the impact of preexisting impressions on the respondents' answers, "such efforts are likely to be only partially successful."¹⁷ That is, even if Dr. Kivetz had taken that step, the impact of preexisting impressions would have likely persisted.

54. My conclusion is that Dr. Kivetz's survey should not be considered a reliable source of data for assessing the materiality of the challenged "natural" label. Dr. Kivetz should have blinded the respondents from the identity of Defendants' Products.

DR. KIVETZ'S OPEN-ENDED SURVEY QUESTIONS ARE NOT APPROPRIATE FOR QUANTITATIVE SURVEYS AND UNDERESTIMATE HIS MEASUREMENTS

55. Kivetz uses an open-ended survey question for obtaining information about why consumers said they would purchase or not purchase the product. This is his only substantive question to capture why consumers would purchase the product. An open-ended question format is one where the respondent is asked to write in their own words a response to the survey question, instead of having a list of response options provided to them. Dr. Kivetz's uses this open-ended question to attempt to establish that the "natural" claim is not a "material" or a "common" factor in why consumers purchase Defendants' Products (§51).

¹⁶ Rappeport, Mike. 2012. "Design Issues for Controls." In Shari Seidman Diamond and Jerre B. Swann (editors), Trademark and Deceptive Advertising Surveys. American Bar Association. p.225.

¹⁷ Shari Seidman Diamond. 2011. "Reference Guide on Survey Research." Reference Manual on Scientific Evidence, pp. 397-398.

56. The hallmark of open-ended questions is that the respondents must be sufficiently motivated, literate, and expressive to comply with the survey's request to write in their responses. The respondents vary on these three dimensions, leading to uneven accuracy and depth in responses. The respondents lacking in motivation, literacy, or expressiveness are predictably less likely to provide responses useful for analysis, which results in underestimation of the study's measures.
57. Because of these considerations and others, I have never relied on open-ended survey questions to derive statistical estimates when conducting false advertising surveys. Open-ended survey questions have merit for qualitative and quasi-qualitative research, but they are not suitable for quantitative measurement of a population characteristic (such as measure the percentage of consumers who were influenced by the "natural" claim).¹⁸ Experts in the field and the Reference Manual on Scientific Evidence agree that "open-ended questions are more appropriate when a survey is attempting to gauge what comes first to a respondent's mind, but closed-ended questions are more suitable for assessing choices between well-identified options or obtaining ratings on a clear set of alternatives."¹⁹
58. Close-ended questions are actually far more common and standard in market research and public opinion research than open-ended questions.²⁰ The reasons are fairly obvious to researchers who design marketing and public opinion surveys. First and most importantly, open-ended questions do not lend themselves to quantifying public opinion, attitudes, or beliefs. By their very nature, open-ended questions produce text entries that must be coded

¹⁸ If respondents do answer the question, they may provide only a short response or a response that does not actually answer the question. Dillman, Don A., et al. 2014. Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th Edition. at 208-209.

¹⁹ Federal Judicial Center, Reference Manual on Scientific Evidence, p. 394 (3d ed. 2011). Schuman, H. & Presser, S. 1981. Questions and Answers in Attitude Surveys, New York: Academic Press.

²⁰ Open-ended survey questions are "exploratory in nature," while "questions that are closed-ended are conclusive in nature as they are designed to create data that is easily quantifiable. The fact that questions of this type are easy to code makes them particularly useful when trying to prove the statistical significance of a survey's results." "Closed-ended vs open-ended questions," SurveyMonkey, <https://www.surveymonkey.com/mp/comparing-closed-ended-and-open-ended-questions/>.

into categories to be usable for quantitative analysis. In contrast, respondents answering close-ended questions provide unambiguous selections that require no further interpretation by the researcher to be useful for quantitative analysis.

59. Second, the respondents also frequently will not make the effort to answer open-ended questions, as they require the respondent to express actual words for the survey. As a result, there tends to be an underestimate of actual prevalence of opinions from open-ended questions because of non-response (that is, not writing in a response) to the open-ended questions.²¹
60. Third, open-ended questions are problematic for people taking surveys on mobile devices, where typing can often be difficult. In a typical online consumer surveys, approximately 30% to 50% of the interviews are completed on a mobile device.²² Research suggests there is often high item nonresponse to open-ended questions on mobile devices. If the respondents do answer the question, they may provide only a short response or a response that does not actually answer the question.²³
61. Fourth, open-ended questions also require subjective coding of the text responses for the data

²¹ Non-response bias can happen from open-ended surveys because of chronic non-response to the open-ended questions. Borg, I. 2005, Who writes what kinds of comments? Some new findings, in A. I. Kraut (Chair), *Grappling with write-in comments in a web-enabled survey world*, Symposium conducted at the 20th annual conference of the Society for Industrial and Organizational Psychology, Los Angeles, California; Poncheri, R. M., Lindberg, J. T., Thompson, L. F., & Surface, E. A. 2008, A comment on employee surveys: Negativity bias in open-ended responses, *Organizational Research Methods*, 11, 614-630. Bias from open-ended survey questions can also happen from a tendency for respondents with more negative attitudes to be more likely to respond to open-ended survey questions, while more satisfied respondents are less likely to take the effort to respond to open-ended survey questions. McNeely, R. L. 1990, Do respondents who pen comments onto mail surveys differ from other respondents? A research note on the human services job satisfaction literature, *Journal of Sociology & Social Welfare*, 17(4), 127-137; *see also* Bernard C.K. Choi and Anita W.P. Pak, January 2005, [Preventing Chronic Disease](#). 2(1): A13. A Catalog of Biases in Questionnaires “Open-ended questions can result in data with differential quality. Also, respondents are likely to be unwilling to take the time to answer them.”

²² Based on my professional experience in conducting dozens of surveys in the past two to three years.

²³ Dillman, Don A., et al. 2014. Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th Edition. at 208-209.

to be useful for quantitative estimates. Because the text-based responses are not useful on their own for analysis, researchers develop coding schemes to categorize the text-based responses into categories. The process of developing the coding schemes and then actually coding the text-based responses can be easily criticized as a subjective exercise that can introduce bias.²⁴

62. Finally, open-ended questions can provide biased responses since lesser-educated or less literate subpopulations are less likely to answer them or answer them with sufficient completeness to permit coding of the responses.²⁵
63. Open-ended survey questions have their purpose in research, but Dr. Kivetz's use of this question format does not provide the basis for an accurate and reliable measurement of why consumers' purchase Defendants' Products, in my expert opinion.

CONCLUSION

64. I drew on my 18 years of experience in designing and conducting online surveys and my 25 years of experience in survey research to design and produce a reliable price premium survey. I followed a rigorous protocol for developing the survey questionnaire using cognitive interviews and pretesting. I carried out a series of quality control and quality assurance measures to confirm that the respondents understood the survey questions. I designed the survey sample to identify a representative sample of Tom's of Maine toothpaste consumers. I processed, analyzed, and reported on the survey data based on my experience and expert judgment.
65. Defendants' experts did not provide any evidence that has led me to revise my expert opinions that I have provided in this litigation. In my expert opinion, my conjoint survey

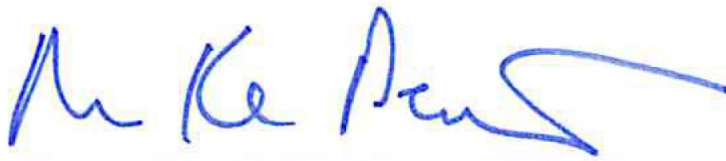
²⁴ Mistakes in coding answers to open-ended questions is endemic. See Arthur Lupia, Challenges and Opportunities in Open-Ended Coding. Available at https://iriss.stanford.edu/sites/default/files/lupia_slides.pdf. Since Kivetz did not disclose his coding decisions at the respondent level, I cannot independently test his coding decisions for accuracy.

²⁵ Dillman, Don A., et al. 2014. Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method, 4th Edition. Wiley; Schuman, H. & Presser, S. 1981. Questions and Answers in Attitude Surveys, New York: Academic Press.

provides a reliable and accurate measurement of the extent to which there is a marketplace price premium attributable to the challenged “natural” claim for the proposed class of Tom’s of Maine toothpaste consumers. It is my expert opinion that I could apply my price premium survey methodology to consumers of Tom’s of Maine deodorant products, providing reliable data on any economic loss caused by Defendants’ use of the “natural” claim on their deodorant products.

66. Dr. Kivetz’s surveys are not reliable, in my expert opinion. They are not a substitute for my conjoint survey since he did not conduct a price premium survey.
67. The facts and data that I considered for this report are cited herein. I reserve the right to modify my opinions if I am provided additional information, and to supplement them, if necessary, to respond to criticisms or objections from the opposing party.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge. Executed in East Palo Alto, California on November 21, 2018.



J. MICHAEL DENNIS, PH. D

November 21, 2018.

DATE

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Education

University of Texas, Austin	Government	B.A.	1984
University of Texas, Austin	Government	M.A.	1986
University of Chicago	Political Science	Ph.D.	1992

Employment

2015-Present	Senior Vice President, NORC
2014-Present	President and Owner, JMDSTAT Consulting Inc.
2012-2014	Managing Director, GfK Custom Research LLC (GfK acquired Knowledge Networks in January 2012)
2009-2011	Executive Vice President, Knowledge Networks
2007- 2008	Senior Vice President, Knowledge Networks, Inc
2001-2006	Vice President and Managing Director, Knowledge Networks, Inc
2000-2001	Vice President of Operations and Survey Research, Knowledge Networks, Inc.
1999-2000	Senior Scientist, Abt Associates Inc.
1998-1999	Senior Survey Director, Abt Associates Inc.
1992-1998	Survey Director, Abt Associates Inc
1989-1992	Research Assistant, Political Science Department, University of Chicago

Notable Past Projects

- Time-Sharing Experiments for the Social Sciences (TESS), 2016-2019, Co-Investigator, Funded by the National Science Foundation (Award No. 1628057). NORC's study director for approximately 140 hundred social science experiments funded by the TESS program.
- Demonstration of a Feasibility of Improving Scientific Literacy and Lifelong Learning through a Just-in-Time Dissemination Process, 2016-2020, Co-Investigator, Funded by National Aeronautics and Space Administration (NASA), (Grant No. F041712). NORC's director of the five-year survey project funded by NASA in collaboration with researchers from the Institute for Social Research, University of Michigan.
- GenForward Panel, 2016-Present. NORC Director, funded by John D. & Catherine T. MacArthur Foundation. NORC's study director for the University of Chicago polling panel of young adults in collaboration with the Black Youth Project and the Associated Press-NORC Center for Public Affairs Research.
- Connecting Health and Technology, 2013-2014, GfK Director, Funded by the American Legacy Foundation. GfK's Study Director responsible for the survey design and management of a custom panel study of 10,000 U.S. teens and young adults measuring the effectiveness of the Legacy "Truth" smoking prevention media campaign.
- Google Screenwise Research Panel 2011-2014, Director. Knowledge Networks' and later GfK's study director responsible for the design and implementation of a new custom panel of broadband households measuring how consumers use the internet.
- Time-Sharing Experiments for the Social Sciences (TESS), 2012-2016, Co-Investigator, Funded by the National Science Foundation (Award No. 1227179). Knowledge Networks/GfK's study director for more than two hundred social science experiments funded by the TESS program.
- American National Elections Studies 2007-2009 Panel Study, Knowledge Networks Principal Investigator, Funded by the National Science Foundation. The Knowledge Networks study director responsible for sampling, data collection methodology, and project management for a longitudinal study of approximately 2,500 households during the historic 2008 Presidential election.
- National Annenberg Election Survey 2007-2009, Knowledge Networks Director, Annenberg Public Policy Center, University of Pennsylvania. The Knowledge Networks study director responsible for project

management for large-scale tracking study (20K interviews per wave) of the U.S. electorate during the historic 2008 Presidential election.

- National Immunization Survey, Abt Associates Data Collection Director, 1997-2000, Funded by the U.S. Centers for Disease Control and Prevention. Responsible for the data collection for the U.S. Federal government's largest random digit dialing telephone survey with approximately 1M households contacted each year.
- Project Network (First Followup), Abt Associates Project Director, Funded by the U.S. Social Security Administration. Led the project management team for this in-person field study.
- Estimation of the Number of Hard Core Drug Users in the U.S., Office of National Drug Control Policy
- Access to Kidney Transplantation, Agency for Health Care Policy and Research. Led the survey project management team for this in-person field study testing an experimental method for estimating hard core drug use.
- A Case Control Study of Stomach Cancer in Poland and Polish Americans, National Cancer Institute
- The Prevalence of Alcohol and Other Drug Abuse and Dependence in Short Term General Hospitals and the Impact of Abuse and Dependence on Hospital Utilization, Charges and Costs, National Institute of Alcohol Abuse and Alcoholism

Expert Witness in Litigation in Last 4 Years

1. February 5, 2016. Expert Deposition. Miner v Philip Morris Companies, Inc. and Philip Morris, Incorporated. In the Circuit Court of Pulaski County, Arkansas Sixth Division Case No. 60CV03-4661.
2. February 12, 2016. Expert Deposition. Scotts EZ Seed Litigation. Case No. 12-CV-4727 (VB) (PED) (S.D.N.Y.).
3. March 8, 2016. Expert Deposition. Dzielak v Whirlpool. Case No. 12-cv-00090 (D.N.J.).
4. March 18, 2016. Expert Deposition. Darisse v. Nest Labs, Inc. Case No. 5:14-cv-01363. U.S. District Court of Northern California.
5. March 22, 2016. Expert Testimony at Trial. Larsen (formerly Craft) v. Philip Morris, Missouri Circuit Court, Twenty-Second Judicial Court. Case No. 002-00406-02.
6. May 5, 2016. Expert Deposition. Miner v Philip Morris Companies, Inc. and Philip Morris, Incorporated. In the Circuit Court of Pulaski County, Arkansas Sixth Division Case No. 60CV03-4661.
7. August 29, 2017. Expert Deposition. Jones et al. v. Nutiva. Case No. 3-16-cv-00711-HSG. United States District Court for the Northern District of California.
8. October 17, 2017. Expert Deposition. Brenner v The Proctor & Gamble Co. Case No.: 8:16-1093-JLS-JCG. United States District Court for the Central District of California.
9. October 23, 2017. Expert Deposition. Dean et al v Colgate-Palmolive Co. Case No. 5:15-CV-00107. United States District Court for the Central District of California.
10. November 13, 2017. Expert Deposition. Joann Martinelli et al v. Johnson & Johnson and McNeil Nutritionals, LLC. Case No. 2:15-cv-01733-JAM-DAD. United States District Court, Eastern District of California.
11. November 21, 2017. Expert Deposition. Strumlauf et al v. Starbucks Corporation. Case No. 4:16-cv-1306-YGR. United States District Court, Northern District of California.
12. December 11, 2017. Expert Deposition. IN RE: AMLA LITIGATION. Consolidated Case No. 1:16-cv-06593 (JSR). United States District Court, Southern District Of New York.
13. January 19, 2018. Expert Deposition. Williams-Sonoma Song-Beverly Act Cases. Superior Court of the State of California, County of San Francisco.
14. April 13, 2018. Expert Deposition. Fitzhenry-Russell, et al. v. Dr. Pepper Snapple Group, Inc., Dr Pepper/Seven Up, Inc., and Does 1-50, Case Nos. 5:17-cv-00564-NC (lead); 5:17-02341-NC (consolidated). United States District Court, Northern District of California.
15. June 22, 2018. Expert Deposition. Theodore Broomfield, et al. v. Craft Brew Alliance, Inc., et al. Case No. 5:17-cv-01027-BLF. United States District Court, Northern District of California, San Jose Division.
16. August 21, 2018. Expert Deposition. Anne De Lacour et al. v. Colgate-Palmolive Co., and Tom's of Maine Inc. United States District Court of New York. 16 Civ. 8364 (RA) (AJP).
17. September 5, 2018. Expert Deposition. Suzanna Bowling et al. v. Johnson & Johnson and McNeil Nutritionals, LLC. U.S. District Court, Southern District of New York. Case No. 1:17-cv-03982.

18. September 10, 2018. Expert Deposition. Dzielak et al. v. Whirlpool. U.S. District Court, District of New Jersey. Civil Action No. 2:12-cv-00089-KM-JBC.
19. October 26, 2018. Expert Deposition. Ryan Porter and Haarin Kwon v. NBTY, Inc., United States Nutrition, Inc., Healthwatchers (DE), Inc., et al. U.S. District Court, Northern District of Illinois. Civil Action No. 15-cv-11459.
20. October 30, 2018. Expert Deposition. Browning and Basile et al. v. Unilever United States, Inc. U.S. District Court, Central California. Case No. 8:16-CV-2210-AG-KES.

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J. Michael Dennis. "Three Countries, Three Systems," in Jon Elster and Nicolas Herpin, eds., The Ethics of Medical Choice, London: Pinter, 1994.

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Ipek Bilgen, J. Michael Dennis, and Nada Ganesh. Examination of Nonresponse Follow-up (NRFU) Impact on AmeriSpeak Panel Data Quality and Study Estimates. Presented at the 2018 Annual Meeting of the American Association for Public Opinion Research.

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Dennis, J. Michael. Yelena Kruse, and Trevor Tompson. 2011. “Examination of Panel Conditioning Effects in a Web-Based 2007-2008 Election Study.” Presented at the 2011 Annual Conference of the American Association for Public Opinion Research.

Zukin, Cliff, Jessica Godofsky, Carl Van Horn, Wendy Mansfield, and J. M. Dennis. 2011. “Can a Non-Probability Sample Ever be Useful for Representing a Population? Comparing Probability and Non-Probability Samples of Recent College Graduates.” Presented at the 2011 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/docs/aapor2011/aapor11-can-a-non-probability-sample.pdf>

Baker, Reg. Stephen Blumberg, J. Michael Brick, Mick P. Couper, Melanie Courtright, J. Michael Dennis, Don Dillman, Martin R. Frankel, Philip Garland, Robert M. Groves, Courtney Kenned, Jon Krosnick, Sunghee Lee, Paul J. Lavrakas, Michael Link, Linda Piekarski, Kumar Rao, Douglas Rivers, Randall K. Thomas, and Dan Zahs. 2010 “AAPOR Report on Online Panels.” The Final Report of the AAPOR Online Panel Task Force. Prepared for the American Association for Public Opinion Research, March, 2010.

Dennis, J. Michael, “Using Ancillary Data Available for Address-Based Sampling to Measure Self-

Selection Bias” Paper presented to the International Workshop on Using Multi-level Data from Sample Frames, Auxiliary Databases, Paradata and Related Sources to Detect and Adjust for Nonresponse Bias in Surveys, Chicago, June, 2011.

Dennis, J. Michael, Jordon Peugh, and Pat Graham. 2010. “KnowledgePanel Calibration: Using KnowledgePanel to Improve the Sample Representativeness and Accuracy of Opt-in Panel Data.” Available at <http://www.knowledgenetworks.com/ganp/docs/KN-Calibration-Research-Note-2010-03-02.pdf>

Dennis, J. Michael. 2010. “KnowledgePanel®: Processes & Procedures Contributing to Sample Representativeness & Tests for Self-Selection Bias.” Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Dennis, J. Michael, and Charles A. DiSogra. 2010. “Does Providing Internet Access to Non-Internet Households Affect Reported Media Behavior for Latinos and Non-Latinos? Results from a Six-Month Longitudinal Survey.” Presented at the 2010 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

DiSogra, Charles, J. Michael Dennis, and Mansour Fahimi. 2010. “On the Quality of Ancillary Data Available for Address-Based Sampling.” Presented at the 2010 Joint Statistical Meetings, Vancouver. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Kruse, Yelena, Erlina Hendarwan, J. Michael Dennis, and Charles A. DiSogra. 2010. “Analysis of Late Responders to Probability-based Web Panel Recruitment and Panel Surveys.” Presented at the 2010 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Garrett, Joe, J. Michael Dennis, and Charles A. DiSogra. 2010. “Non-response Bias: Recent Findings from Address-based Panel Recruitment.” Presented at the 2010 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Dennis, J. Michael, Larry Osborn, and Karen Semans. March 2009. “Comparison Study of Early Adopter Attitudes and Online Behavior in Probability and Non-Probability Web Panels.” Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Dennis, J. Michael. 2009. “Description of Within-Panel Survey Sampling Methodology: The Knowledge Networks Approach.” Available at <http://www.knowledgenetworks.com/ganp/docs/KN-Within-Panel-Survey-Sampling-Methodology.pdf>.

Dennis, J. Michael, Trevor Thompson, Mike Henderson, and Yelena Kruse. 2009. “Measures of Non-Traditional Media Consumption During the 2008 Presidential Campaign.” Presented at the 2009 Annual Meeting of Midwest AAPOR, November 21, 2009.

Dennis, J. Michael, and Trevor Thompson. 2009. “Web Panel Studies of the 2008 Election: New Opportunities for Causal Analysis of Dynamic Change in the Electorate.” Presented at the 2009 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

Kruse, Yelena, Mario Callegaro, J. Michael Dennis, Stefan Subias, Mike Lawrence, Charles DiSogra, and Trevor Thompson. 2009. “Panel Conditioning and Attrition in the AP-Yahoo! News Election Panel Study.” Presented at the 2009 Annual Conference of the American Association for Public Opinion Research. Available at <http://www.knowledgenetworks.com/ganp/reviewer-info.html>.

J. Michael Dennis, Rick Li and Joe Hadfield. 2007. “Results of a Within-Panel Survey Experiment of Data Collection Mode Effects Using the General Social Survey’s National Priority Battery.” Presented at the 2007 Annual Conference of the American Association for Public Opinion Research.

J. Michael Dennis and Rick Li. 2005. "Results from a Knowledge Networks' Question Wording Experiment for Political Party Identification." Available at <http://www.knowledgenetworks.com/ganp/docs/kn-party-id-experiment-022805.pdf>

J. Michael Dennis, Cindy Chatt, Rick Li, Alicia Motta-Stanko, Paul Pulliam. 2005. "Data Collection Mode Effects Controlling for Sample Origins in a Panel Survey: Telephone versus Internet." Available at <http://www.knowledgenetworks.com/ganp/rmode.html>.

J. Michael Dennis and Rick Li. 2004. "Health Condition Prevalence Rates Between National Health Interview Survey (NHIS) and Knowledge Networks (KN)." Available at <http://www.knowledgenetworks.com/ganp/docs/KNvsNHIS2.pdf>

J. Michael Dennis and Rick Li. 2004. "Weighting Procedures Used for the Veterans Administration Prescription Medication Study." Available at http://www.knowledgenetworks.com/ganp/docs/061604_Weighting-Description.pdf.

J. Michael Dennis, Rick Li, and Cindy Chatt, 2004. "Benchmarking Knowledge Networks' Web-Enabled Panel Survey of Selected GSS Questions Against GSS In-Person Interviews." Knowledge Networks Report, February 2004. Available at <http://www.knowledgenetworks.com/ganp/docs/GSS02-DK-Rates-on-KN-Panel-v3.pdf>

Vicky Pineau and J. Michael Dennis. 2004. "Methodology for Probability-Based Recruitment for a Web-Enabled Panel." Knowledge Networks Report

J. Michael Dennis. 2003. "Panel Attrition Impact: A Comparison of Responses to Attitudinal and Knowledge Questions about HIV Between Follow-up and Cross-Sectional Samples." Available at <http://www.knowledgenetworks.com/ganp/docs/HIV-Study-Panel-Attrition-Impact-Research-Note-2003.pdf>

J. Michael Dennis, Rick Li, J.R. DeShazo and Trudy Ann Cameron. 2003. "Correcting for Sample Bias in Internet Panel Surveys based on RDD Sampling." Presented at the Joint Statistical Meetings, August 2003

Dennis, J. Michael, Rick Li. 2003. "Effects of Panel Attrition on Survey Estimates." Presented at the 2003 Annual Conference for the American Association for Public Opinion Research.

Selected Workshops, Expert Panels, and Seminars

Featured Speaker. AARP "Think In" on Surveys of Asian Americans and Pacific Islanders. July 23-24, 2018. Washington, DC.

Member, NHTS Work Task Force Committee, Transportation Research Board, National Highway Travel Survey, 2018.

Expert Panel Participant, National Survey of Family Growth, U.S. Centers for Disease Control and Prevention, April 30, 2018 – May 1, 2018.

Panel Participant and Featured Speaker. "Workshop: Harnessing Technology to Reduce Attrition in Panel Surveys." Inter-American Development Bank. Washington DC, October 2, 2017.

Featured Speaker. Briefing Congress on the Legal Services Corporation New Report on *The Justice Gap: Measuring the Unmet Civil Legal Needs of Low-Income Americans*. Russell Senate Building, Washington DC, June 14, 2017.

Panel Participant in an Invited Panel Session entitled “Better, Faster, Smarter – Maintaining Research Quality in a World of Intense Budget Pressure.” Annual Meeting of the Southern Association for Public Opinion. October 10, 2013.

“The NCRM Network of Methodological Innovation Web surveys for the general population: How, why and when?” Workshop hosted by the University of Essex, Colchester, UK. Presented the paper “Recommendations for Establishing a National Online Panel in the UK.” June 6-7, 2013.

“The Data Collection of the Future Has Already Started.” Seminar hosted by Willem Saris, RECSM, Universitat Pompeu Fabra in Barcelona. Presented the paper “Best Practices for Population-Based Online Surveys: Review of U.S. Methods Research.” July 2011.

“An International Workshop on Using Multi-level Data from Sample Frames, Auxiliary Databases, Paradata and Related Sources to Detect and Adjust for Nonresponse Bias in Surveys.” Sponsored by the National Science Foundation and hosted by NORC in Chicago. June 2011.

“Innovative Survey Methods Workshop.” Sponsored by the U.S. Department of Homeland Security and the Institute for Homeland Security Solutions. December 2009.

“Sample Representativeness: Implications for Administering and Testing Stated Preference Surveys.” Sponsored by EPA Cooperative Agreement CR83299-01 with the National Center for Environmental Economics, U.S. Environmental Protection Agency. Hosted by the Resources for the Future. October 2, 2006.

“Recurring Surveys: Issues and Opportunities.” Sponsored by the National Science Foundation. March 28-29, 2003.

Selected Guest Lecturer Assignments

George Washington University, University of California, Irvine, University of California, Berkeley, University of Michigan, University of Maryland, University of Pennsylvania, University of Southern California (USC), University of Texas, Austin, Stanford University.

Educational Honors

Century Fellowship, University of Chicago (1985-1988)

Phi Beta Kappa, University of Texas (1984-1985)

Honors in Government, University of Texas (1984)

Chapter President, Pi Sigma Alpha, University of Texas (1983-1984)

William Jennings Bryan Essay Winner, College of Liberal Arts, University of Texas (1983 and 1984)

Affiliations

American Association for Public Opinion Research (1992-), American Statistical Association, Member, AAPOR Online Task Force Report (2009-2010), Chairman, Presumed Consent Subcommittee, Ethics Committee, UNOS (1992-1995), Member of Ethics Committee, the United Network for Organ Sharing (1992-1995), Member of Region 7, the United Network for Organ Sharing (1992-1995), American Political Science Association (1985-1994)